AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph beginning at page 8, line 11 and ending at page 9, line 1, as follows:

Fig. 22 is a graph that shows the frequency characteristics of reproduction signal based on the histogram of asymmetric reproduction waveform of Fig. 21B. In addition, Fig. 22 also shows the frequency characteristics of the desired PR characteristics. In Fig. 21B, the left side from the center of the reproduction signal level is designated as mark and the right side as space. In the graph of Fig., 22, when the standardized frequency is taken as abscissa and the gain as ordinate, characteristics on the mark side and the characteristics on the space side differ each other due to the influence of asymmetry. As easily understood, in order to equalize the reproduction waveform to have desired PR characteristics, the equalizer must carry out equalization with characteristics that differ on the mark side and on the space side. However, the conventional waveform equalizer [[6]] 186 cannot equalize the reproduction waveform to have desired PR characteristics highly accurately because the same equalization is carried out on the mark side and the space side. As a result, variance in the output signal of the maximum likelihood decoder [[6]] 187 (Fig. 16) increases, resulting in degraded performance.